Stolt Sea Farm California LLC

A subsidiary of
Stolt-Nielsen S.A.

9149 East Levee Road,
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Telephone: (916) 991-4420
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Ms. Mary Humphreys
Office of the Administrator
Cooperative State Research,
Education, and Extension Service
U.S. Department of Agriculture
STOP 2201
1400 Independence Avenue, SW.
Washington, DC 20250-2201

2 October 2001

Dear Ms. Humphreys,

Enclosed is written testimony in support of the Regional Aquaculture Centers. My intention was to verbally present this testimony at the Fresno listening session on 3 October. Unfortunately circumstances precluded me from doing so.

Please accept this written testimony as a substitute. If you have any questions, feel free to contact me at the address on this letterhead.

Sincerely,

Jim Michaels

Rec'd
10/16/01

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Written testimony to the Cooperative State Research, Education, and Extension Service (CSREES)

SUPPORT FOR THE REGIONAL AQUACULTURE CENTERS

Prepared Statement By

JAMES T. MICHAELS II
STOLT SEA FARM CALIFORNIA LLC
9149 EAST LEVEE RD
ELVERTA, CALIFORNIA 95626

2 October 2001

My name is Jim Michaels. I am the Operations Manager of the Sierra Site of Stolt Sea Farm California LLC and have been growing fish for over 20 years. Our company grows white sturgeon for meat and caviar production. I am Vice President of the California Aquaculture Association. I also serve on the Industry Advisory Council for the Western Regional Aquaculture Center (WRAC).

U.S. Government projections indicate that U.S. consumption of seafood will continue to increase throughout the 21st century. In fact, U.S. demand for seafood over the next 25 years will require either 6 times the domestic aquaculture production currently available or a commensurate increase in seafood imports. The latest Seafood Market Analysis reported that the US seafood trade deficit has reached a record setting $7.1 billion in 2000. This is a 16% rise over 1999's $6.1 billion deficit.

This increase in domestic aquaculture production cannot happen without government research assistance through programs such as the Regional Aquaculture Centers. This program has helped create numerous success stories within the aquaculture industry. It's practical approach via an academic/industry consortium to answer questions that would be difficult for either entity to answer individually has leveraged grant dollars to many multiples.

The unique method that the Regional Aquaculture Centers use i.e. industry driven research objectives coordinated in a multi-state fashion utilizing the best available research talent has allowed for many success stories. It is imperative that this approach be continued. The challenges that will face this industry's needed expansion are many. Granting institutions such as the Regional Aquaculture Centers are absolutely essential in helping our industry meet these challenges.

WRAC's Industry Advisory Council met recently to prioritize the research needs of the 12 western states. These 12 states had 37 research priorities. Because of funding realities, our council was forced to pick the top 6 priorities to be forwarded to WRAC for funding consideration, understanding that probably only 2 or 3 of these priorities will be funded.

The selected top research priorities are as follows:

1) **Immunology of warm and cool water fishes:** The intensive culture of warmwater and coolwater fish species is rapidly emerging as the fastest growing aquaculture sector in the West. However, future growth and continued expansion of this valuable segment of the industry is threatened by high mortalities and added production costs due to diseases.

   There is a strong need to reduce the impacts from disease. The first step is to gain a better understanding of fish immune functions in intensive culture environments and how these protective responses are affected by various physical and biological factors.

2) **Bird control for non-enclosable aquaculture facilities:** Birds cause millions of dollars of losses to aquaculture facilities each year by consuming or physically damaging aquatic animals and plants as well as acting as a vector for disease. Many aquaculture operations rely on the use of freshwater ponds or marine shorelines that would be impractical or illegal to enclose with bird exclusion devices. The industry needs the development and evaluation of economical, environmentally sound, socially acceptable, and effective deterrent methodologies for bird predators.

3) **Whirling disease control:** Whirling disease is a salmonid disease that can cause significant losses of production to growers. Much has been recently discovered about this disease, but much is still lacking in the understanding of practical and effective control. The industry needs a better understanding or how to economically control this disease with minimal environmental impacts.

4) **Native Cutthroat trout egg production:** Native cutthroat trout is a significant sports-fishing species. Currently there is a paucity of broodstock and thus a limited production of stockable fish. Research is needed into proper hatchery and growing techniques of this species so that production of this species can increase to meet demand.

5) **Integrated Agriculture/Aquaculture system development.** Water is the life-blood of agriculture. Opportunities exist to integrate aquaculture production within the water conveyance systems of agriculture thus increasing overall food production. The agriculture and aquaculture industries would both benefit from research into this area.

6) **Expansion of therapeutant uses to other species:** Under the oversite of the Center for Veterinary Medicine, the aquaculture industry is headed towards gaining some relatively "narrow" therapeutant label claims that focus mainly on salmonid and catfish species. In many cases, the industry simply does not have the data to support label claims for use in other important warm and cool-water species. There is a strong need for the funding of field trials that provide pivotal and supportive data for the use of antibiotics and chemotherapeutic therapy on other species.

The Regional Aquaculture Centers have an authorized funding level of $7.5 million. They have been funded at the $4 million level for more than 8 years. Funding increases to account for inflation have not occurred therefore the actual dollars available for research have been decreasing each year.

I urge you to continue supporting the five Regional Aquaculture Centers and respectfully request your consideration to increase funding to the fully authorized funding level of 7.5 million dollars.

Thank you for the opportunity of providing written testimony on such an important subject.

Sincerely,

James T. Michaels II

Cc: Dr. Kenneth Chew; Western Regional Aquaculture Center